MicroVAX Diagnostic Monitor Release Notes

Order Number AA–GO3AT–TN

These release notes describe restrictions, undocumented features, and other essential information about the MicroVAX Diagnostic Monitor (MDM) Version 4.1, Release 130. These release notes supersede all other MDM documentation.

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Preface

These release notes describe new features, enhancements, and bug fixes for the MicroVAX Diagnostic Monitor (MDM) Version 4.1, Release 130 as they apply to diagnostic development.

Intended Audience

These release notes are intended for the following people:

- System managers who are installing MDM
- Individuals responsible for maintaining MicroVAX systems

Document Structure

These notes are organized as follows:

- Chapter 1 lists updates.
- Chapter 2 lists new features and enhancements.
- Chapter 3 lists problems and corrections.

Associated Documents

The following is a list of the available MDM documents:

- *MDM Programmer's Guide*
- *MDM Development Kit Installation Guide*
- *MDM User's Guide*
- *MDM Ethernet Server User's Guide*
- *MDM RA/RD Customer Release Notes*
- *MDM RA/RD Maintenance Release Notes*
- *MDM Hard Disk User's Guide*
- *MDM Reference Card*

Conventions

This book uses the following conventions:

KEY	Indicates a key on your keyboard.
CTRL/key	Indicates control keys. For example, Control C is shown as CTRL/C.
Bold print after prompt	Indicates user input.
UPPERCASE characters	Indicate input that you should type exactly as shown.
lowercase characters	Indicate input that you should replace with an appropriate word or phrase. For example, in the following interactive command: MDM>> **SELECT devicename** SELECT should be typed as shown, but *devicename* should be replaced with the actual name of a device.

Chapter 1
Updates

This chapter updates information necessary to run MicroVAX Diagnostic Monitor (MDM).

1.1 General MDM Updates

This section updates hardware and installation requirements.

1.1.1 2M-Byte System Support Restriction

This MDM release requires at least 2M bytes of memory. The monitor uses approximately 1.5M bytes. Note that the average diagnostic size requires roughly 350K of memory; if the memory requirements exceed the available memory, MDM will not run.

1.1.2 Remote Console

MDM remote console can run on only one target system at a time from a particular host account. When a second remote session is initiated from the same account, either an exception occurs on one of the target systems or neither target system will run MDM correctly.

1.1.3 Device Diagnostic Support

Table 1–1 provides updates on device support.

Table 1–1: Device Diagnostic Support

Controller	Device	Revision	File Name
CPU	KA620	I	NAKAA
	KA630		
	KA640		
	KA650		
	KA655		

Table 1–1 (Cont.): Device Diagnostic Support

Controller	Device	Revision	File Name
	KN210		
MEMORY	KA620	J	NAMSA
	KA630		
	MS630		
MEMORY	MS650	F	NAMTA
LPV11	LP25	G	NALPA
	LP26		
	LP27		
	LG01		
	LG02		
RQDX2 & RQDX3	RX50	Q	NARXA
	RD32		
	RX33		
	RD52		
	RD53		
	RD54		
KDA50–Q & KLESI	RA81	P	NAKDA
	RA82		
	RA70		
	RA60		
	RC25		
TQK50	TK50	I	NATKA
	TK70		
DEQNA	QNA	P	NAXQA
	DELQA		
	DESQA		
DLV11	–	D	NADLA

Table 1–1 (Cont.): Device Diagnostic Support

Controller	Device	Revision	File Name
DZQ11 & DZV11	–	G	NADZA
DRV11–WA	–	I	NADRA
DRV11–J	–	E	NADRB
DPV11	–	G	NADPA
DMV11	–	I	NADMA
KRQ50	RRD40	I	NARRA
	RRD50		
KMV11A (KMV1A)	–	F	NAKMA
KMV11B (KMV1B)	–	F	NAKMA
IEQ11	–	B	NAIEA
DHQ11		K	NADHA
CXY08	–		
CXA16	–		
CXB16	–		
CXF32	–		
DHF11	–		
DHV11	–		
DFA01	–	E	NADFA
VCB01	–	F	NAVCA
KWV11–C	–	F	NAKWA
ADV11–DA	–	G	NAADA
AAV11–DA	–	H	NAAAA
AAV11–C	–	B	NAAAC
ADV11–C	–	B	NAADC
AXV11–C	–	E	NAAXA
VCB02	–	F	NAVCB
DSV11	–	G	NADSA

Table 1–1 (Cont.): Device Diagnostic Support

Controller	Device	Revision	File Name
VSV11	VSV21–AA	G	NAVVA
	VSV21–CA		
	VSV90		
DRQ11–C	–	B	NADQA
LNV11	–	D	NALAA
LNV11	–	C	NALNA
TU81E	–	H	NATUA
TSV05	–	J	NATSA
DRQ3B	–	F	NAQBA
IBQ01	–	C	NAIBA
IAV11–A	–	C	NAIAA
IAV11–B	–	C	NAIAB
IDV11–A	–	C	NAIDA
IDV11–B	–	F	NAIDB
IDV11–C	–	C	NAIDC
IDV11–D	–	C	NAIDD
MIRA	–	G	NAMIA
KXJ11	–	H	NAKXA
ADQ32	–	F	NAAQA
RV20	–	F	NARVA
DESNA	–	D	NACQA
DTC–04	–	C	NADTA
IGQ11	–	B	NAIGA
KWB11–W	–	B	NAKWB
KWV11–W	–	B	NAKWB
POLARSTAR	–	C	NAQCA
GS03–WD–DHV11	–	A	NAGSA

Table 1–1 (Cont.): Device Diagnostic Support

Controller	Device	Revision	File Name
GS03–WD–DQZ11	–	A	NAGSB
LANCE	–	D	NALAN
DSSI	RF30	C	NADSI
	RF71		
VS550	–	C	NAVSA
KFQSA	RF30	E	NAKFA
	RF71		
DIV32		C	NADIA
KWV32		A	NAKWC
DELIX[1]	–	D	NADXA
RQX05	–	C	NARQA

[1] Indicates diagnostics that are included on the media, but are not supported in the auto-configuration information. To use these diagnostics the custom configuration commands must be used.

1.1.4 MDM System Notes and Updates

You will find a Software Performance Report (SPR) form in each kit. These SPR forms provide two functions. First, they are a means of letting the software developers know as soon as possible about problems found in the product. Secondly, they provide users a way to offer suggestions based on actual use of the product.

1.1.5 TK50 Load Times

Table 1–2 is a chart of TK50 and TK70 load times for MDM Versions 114 through 130. Load time is the length of time necessary for a system to load and configure the diagnostics for the individual devices in the system. The listed times do not include the length of time needed for the monitor to load initially (the elapsed time from the BOOT command to the display of the disclaimer).

The difference in load times on the same system between KA650 CPU and MicroVAX CPU is less than 3%. The KA650 is slightly faster than the MicroVAX. Thus, load times are not CPU-dependent.

Table 1–2: TK Load Times (in minutes)

Release	TK50	TK70	TK50	TK70	TK50	TK70	TK50	TK70
	(CONFIG 1)		(CONFIG 2)		(CONFIG 3)		(CONFIG 4)	
114	07:49	na*	06:50	na*	19:52	na*	09:30	na*
115	25:55	na*	39:44	na*	35:23	na*	14:21	na*
116	09:33	na*	12:21	na*	24:49	na*	12:19	na*
116A	11:21	na*	09:47	na*	25:59	na*	12:54	na*
118	10:25	na*	10:30	na*	29:46	na*	13:06	na*
120	10:12	06:55	10:11	07:01	31:02	23:21	13:15	07:55
121	07:30	04:59	06:04	05:57	17:49	15:22	07:40	05:55
122	06:18	05:08	06:22	05:07	19:04	16:28	07:48	06:03
123	07:26	05:11	06:29	05:12	19:41	16:42	09:17	06:10
124	09:36	07:00	09:17	06:50	21:55	18:52	11:08	08:18
125	10:05	07:40	10:10	07:30	22:25	21:04	12:12	08:45
126	09:47	07:09	09:42	07:03	23:25	21:11	11:20	08:30
127	09:31	07:08	09:36	07:00	24:02	21:23	11:27	08:24
128	08:03	07:21	10:11	06:20	23:29	20:26	11:07	07:38
129	09:12	06:33	08:25	05:49	23:11	19:31	na**	na**
130	07:18	05:50	08:32	05:51	22:57	19:15	na**	na**

* Load times are listed in minutes. Versions before 120 did not support TK70 drives. No comparisons can be made between those versions and versions between 120 and 130.

** As of Version 4.0, Release 129, Config 4 will not be supported.

Key to Configuration Devices

- Config 1 = CPU, MEM, DEQNA, RQDX2, DMV11, TK
- Config 2 = CPU, MEM, DEQNA, TK, TSV05, DMV11, KDA50, CXY08
- Config 3 = CPU, MEM, RQDX3, TK, DEQNA, DMV11, KDA50, RC25, DZV11, DZQ11, DPV11, KWV11–C
- Config 4 = CPU, MEM, DEQNA, RQDX3, TK, VCB02

1.1.6 Order Number Reference

Table 1–3 lists order numbers for current diagnostics.

Table 1–3: Order Number Reference

Part Number	Title
ZNA01–C3	Customer diagnostics on RX50
ZNA01–C5	Customer diagnostics on TK50
ZNA02–GZ	MV DIAG MDM ENET CUST DOC
ZNA02–P5	MV DIAG MDM ENET CUST TK50
ZNA02–PH	MV DIAG MDM ENET CUST RL02
ZNA02–PM	MV DIAG MDM ENET CUST 1600 bpi MT
ZNABX–C3	Maintenance diagnostics on RX50
ZNABX–C5	Maintenance diagnostics on TK50
ZNABX–GZ	Maintenance documentation
ZNA07–H5	MV DIAG MDM ENET MAINT TK50
ZNA07–HH	MV DIAG MDM ENET MAINT RL02
ZNA07–HM	MV DIAG MDM ENET MAINT 1600 bpi MT
ZNA07–GZ	MV DIAG MDM ENET MAINT DOC
ZNA08–C5	MV DIAG ULTRIX ENET MAINT TK50
ZNA08–CM	MV DIAG ULTRIX ENET MAINT 16 bpi MT
ZNA08–GZ	MV DIAG ULTRIX ENET MAINT DOC
ZNA09–GZ	MV DIAG ULTRIX ENET CUST DOC
ZNA09–P5	MV DIAG ULTRIX ENET CUST TK50
ZNA09–PM	MV DIAG ULTRIX ENET CUST 1600 bpi MT
ZNA10–C5	MV DIAG RA/RD CUST DIAG TK50
ZNA10–CM	MV DIAG RA/RD CUST DIAG 1600 bpi MT
ZNA11–H5	MV DIAG RA/RD MAINT DIAG TK50
ZNA11–HM	MV DIAG RA/RD MAINT DIAG 1600 bpi MT

1.1.7 Automatic Distribution of Diagnostics

A diagnostic contact has been designated for each geographic area within the U.S. (See Table 1–4.) Field personnel should work with their area contact for all diagnostic needs. This includes additions and deletions to the ADS mailing lists for all VAX, PDP–11, MicroVAX, MICRO–11, and KLAD systems, and any newly released system. They should also work with their area contact to resolve problems.

Table 1–4: Area Contacts for Diagnostic Distribution

Area	Contact	Direct	DTN	ENET Address
CENTRAL	CORINE GORDON	312–640–0301	421–5640	DECMAIL::GORDON
CSC–ATLANTA	ESTHER CREEK	404–953–6174	435–3293	DECMAIL@IPO
CSC–COLORADO	FRANK MENDEZ	719–548–5587	522–5587	NEXUS::MENDEZ
EAST CENTRAL	KAREN PICKETT	313–347–5406	471–5406	USFHSL::PICKETT
IN–DEC	MADDY VEGA	508–467–8274	262–8274	SENIOR::VEGA
MID–ATLANTIC	PAT KOZLOWSKI	215–283–4241	328–4241	DECMAIL@PHH
NEW YORK	BERNIE COUILLARD	212–884–6780	335–6780	OBIWAN::COUILLARD
NORTHEAST	PEARL MAGIERA	508–441–6624	288–6624	NERSW5::MAGIERA
SOUTH CENTRAL	CAROLYN DUERKSEN	214–702–4606	483–4606	DPOMAI::DUERKSEN
SOUTHERN	GWEN BRINKLEY	404–257–2455	351–2455	ODIXIE::GBRINKLEY
SOUTHWEST	PEGGIE ROSE_KOZO	714–261–4418	NONE	SWAM1::ROSE_KOZO
WESTERN	SUSAN BROWN	408–496–3014	521–3014	WR1FOR::BROWNSU
GIA	SONNY NEWSON	719–548–5499	522–5499	BSS::NEWSON

1.1.8 Debugging must be done via the QNA

The QNA is the proper load device to use in a debugging session.

1.1.9 MDM Boot Capabilities

Table 1–5 shows MDM boot and diagnostic load capabilities for media and system. The appropriate kits must be ordered.

Table 1–5: MDM Boot Capabilities

Boot Media	MicroVAX/rtVAX	DECstation 5400
RX	yes	na
TK	yes	yes
Network	yes	yes*
Hard Disk	yes	no

* Host boot node can be on ULTRIX or VMS host, provided DECnet is installed.

1.2 MDM Diagnostic Notes and Updates

All diagnostics have been rebuilt and are incompatible with previous versions of MDM. The diagnostics are source-compatible only. The following diagnostics have been revised for Version 4.1, Release 130:

- NADIAC
- NAKDAP
- NAKWCA
- NAVVAG
- NAXQAP

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Chapter 2
Enhancements and New Features

This chapter discusses enhancements and features that were added to MDM Version 4.1, Release 130. For detailed information on any of the new features, refer to the *MDM User's Guide* and the *MDM Programmer's Guide*.

2.1 Booting from Additional Disk and Tape Controllers

MDM Version 4.1, Release 130 supports booting from any KDA50, KFQSA, RQDX3, or TK50/70 controller. Previously, MDM supported booting only from the first controller. For drives attached to KDA50, KFQSA, or RQDX3 controllers, you can now boot from DUAn, DUBn, DUCn, etc. For drives attached to TK50/TK70 controllers, you must boot from unit 0, but again it can be any controller, for example, MUA0, MUB0, MUC0.

2.2 Development Release Notes Combined with MDM Release Notes

The MDM Development Kit Release Notes have been combined with the regular MDM Release Notes. The new Release Notes will go into all Field Service and Development kits.

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Chapter 3
Problems and Corrections

Monitor problems are divided into four categories:

- Menu problems
- Command Line Mode problems
- Miscellaneous problems
- Diagnostic-based problems

3.1 Menu Problems

Users may have to do an additional CONFIGURATION for Menu 4.3.

If a user brings up MDM and configures the system through CLM and then enters option 3 of Main Menu 4, the following incorrect message and prompt appear:

```
This menu lets you select a device for testing.

No devices in this configuration
You must run CONFIGURE first

Press the RETURN key to continue. >
```

This message is incorrect, because it tells the user that there are no devices in the configuration and that the user must run configure before entering this menu option; however, the user has already configured the system out of CLM. This message continues to be displayed every time the user tries to enter this menu, until the user runs an option out of Menu Mode that causes the system to be configured again. Once a Menu Mode configure has taken place, the user can enter this menu (4.3).

Menu option 4.3 is the Display the Device Menu from the Service Menu.

3.2 Command Line Mode Problems

3.2.1 UNITS ENABLE and DISABLE don't work if unit # >15

The UNITS command in MDM allows the user to ENABLE or DISABLE individual device units. Devices have unit numbers anywhere from 0 to 1024. However, if either the UNITS ENABLE or the UNITS DISABLE command is entered with a unit number greater than 15, the following message is returned:

```
Invalid unit number, Unit number range 0-15
```

and the user has no way to disable or enable any units declared by any devices if the unit numbers are greater than 15.

3.2.2 Reset config takes 1 hour w/rv20 on NA04 image

CONFIGURATION: microvax II,mem,tk50,rqdx3,cxf32,4 rv20's

When loading the above configuration via the NA04A image (TK50 tape drive), if one of the RV20s is connected in, and a configuration is done, it works fine until a RESET CONFIG is entered. When the RESET CONFIGURATION command is entered followed by a Return, the system apparently suspends processing. However, after about 1 hour, the MDM prompt appears. With this configuration, the user should reboot the system rather than reset configuration.

3.3 Miscellaneous Problems

3.3.1 Unsupported Devices

Unsupported devices can display detailed messages from within tests; the detail message flag cannot be turned off for these devices.

3.3.2 RC25—nakdal—Functional tests can give fatal bugcheck

When running the functional tests with pass set to 0 on the KDA50 diagnostic running on the RC25 with the KA650, the following fatal bugcheck will occur:

```
** Fatal Bugcheck, uVDOS V3.0. UNXINTEXC, unexpected interrupt
                                                    or exception

Job 000300D2, Program: nakda

  R0      ...     R4        R5      R6        R7
00000001 ...  00000005 00000001 00000000 00000005
7fffffff ...  000011ea 7ffffd18 80055bf0 80004e04
  R8      ...     AP        FP        SP        PC

KERNEL/INTERRUPT STACK

 80055BF4 04170000
 80055BF8 000096D4
 80055BFC 000000A0

System shutdown complete - use console to halt system
```

This occurs on different pass numbers ranging from 1 to 137; however, it usually occurs after running test 1.

3.3.3 RD boot off DSSI hangs after Reset Config/Config

A feature of Release 128 was the ability to boot the RA/RD/RF kits off the DSSI port. The monitor boots up (MDMDIA.SYS image) and loads the diagnostics correctly on the initial load. However, when you perform a reset configuration either via CLM (RESET CONFIGURATION command) or Menu Mode (menu 5.4 - Activate Menu) followed by a CONFIGURE command, the monitor displays the following message:

```
The system is preparing for testing.

This may take several minutes.
Please wait...
```

The system must be rebooted in order for testing to be continued.

3.3.4 DSL$DELETE_DEVICE won't delete 2nd, 3rd, etc. objects

When calling DSL$CREATE_DEVICE multiple times, the device objects can be manipulated by the DSL$ALLOCATE_MAP call. However, when attempting to delete these objects with DSL$DELETE_DEVICE, only the first device object is deleted. Subsequent calls returns the DSL status of DSL$BAD_STATE and never gets deleted.

3.3.5 MDM Monitor will not boot off a second RF drive DSSI port

When booting MDM from an RF drive attached to the DSSI port it must be unit 0. The user will get a "Fatal Error" when booting from any drive other than DIA0.

A possible solution is to switch the Drive Designation Keys so that MDM resides on the first or lowest number drive.

3.4 Diagnostic-Based Problems

3.4.1 LANCE—Diagnostic does not include device name in setup

The LANCE diagnostic does not include the device name within its SETUP message.

3.4.2 DZV11/nadzaf—Fails exerciser test 1 with DTQNA in config

When the DZV11/DZQ11/DTQNA is configured in a system, a bus timing problem occurs. The failure happens when the DZV11 is the second DZA device. This failure occurs only after the initial boot, not after a RESET CONFIG or CONFIGURE. The failure has also been observed when the DZV11 is the first DZA device in the configuration, but the frequency of occurrence is less.

The failure has been observed when the bus is set up as follows:

```
nakaa   160000  000
namta   160000  000
narxa   172150  154
natka   174500  260
nadza   160100  300     dzq11
nadza   160110  310     dzv11
nadha   160500  320
nazqa   172570  330     dtqna
naxqa   174440  120
```

3.4.3 DTQNA/nazqaa—Cumulative pass count as printed is confusing

A progress message printed out during the running of exerciser and functional tests gives the total count of the number of passes of all tests that have been run. This counter is incremented each time the diagnostic runs a pass of any test and prints the message after every 10 passes. The monitor prints out the following messages, which could confuse the operator about how many passes were executed:

```
pass 1 test 1 started
pass 2 test 1 started
the test has run 10 passes
```

3.4.4 DSSI

When you run the verify test 4 of the DSSI and have the drive off line, the test fails. The verify tests are supposed to run whether or not a drive is attached and on line. This is only a READ test, but still needs the DUP code to run, which does not happen if the drive is off line.

3.4.5 KDA50–QA

The RA82 drive must be spun up in order for the verify mode test to pass. If the drives are not ready, the following error appears:

```
An unrecoverable error has occurred on drive number 0.
Error occurred during MSCP Online command.
MSCP Command Reference Number: 00000003.
MSCP Command status: Drive unit offline
MSCP status subcode: No volume mounted or run/stop switch is off

KDA50QA - Error Number 47 29-JUN-1988 08:00:00.48
Drive became "unit-offline" during a MSCP operation.
Fixed media disk drive
KDA50QA failed.
```

3.4.6 KDA—Fatal bugcheck during config if nonexistent CSR used

When using a KA650 CPU, without a KDA board and connecting it to a nonexistent CSR address for a KDA followed by a CONFIGURE the system command, the diagnostic should look to see if a device is at the specified address. If there is no response, MDM disconnects itself from the CSR address for the KDA. This does work with a MicroVAX CPU but produces a fatal bugcheck if the CPU is a KA650. This also happens with a TK50 device.

The following detail messages are produced:

```
***** Fatal Bugcheck, VAXELN V3.2 FATLMEMERR, unrecoverable
                                                    memory error

        current job = 000300c2

        Program Name= NAKDA

Press return to view remainder of bugcheck info.............

        Register Dump

                R0 = 8018ac78
                        .
                        .
                        .
                PSL=041d0008

        Kernel/Interrupt Stack

                800747f8../....

  system shutdown complete
```

3.4.7 MIRA

When running utility tests 3, 4, or 5 on the MIRA and after the individual general SETUP messages are displayed, the user is prompted to enter a 1 or 2 and press Return, corresponding to the particular mode (maintenance or installation) that the user is in.

If the user enters an out-of-range number (either 0 or greater than 2), the cursor drops to the beginning of next line and waits there. Then, if the user enters either a 1 or 2 and presses Return, the test continues according to which value was entered.

3.4.8 ADV11D–A—Gets fatal bugcheck with utility 5 and 6

When testing the utilities for the ADV11D–A, tests 5 and 6 are looking for a CSR of a second device. Since the device is not a part of this setup, "Ctrl/C" is typed, and then the HALT command is used to exit the test. The system responds with the following message and then crashes:

```
Fatal bugcheck, VAXELN V3.2 FATLMEMERR, unrecoverable
                                              memory error

Current Job = 000300c2
Program Name = NAADA

Test 5 of the utility is "D/A-A/D loopback test"
Test 6 of the utility is "Real time clock start test"
```

3.4.9 AAV11D—Util 12 gives FATAL BUGCHECK when CTRL/C, HALT

In a system with a KA640, DSSI, LANCE, DESQA, and AAV11D, if Utility test number 12 is run on the AAV11D diagnostic, the user is prompted as follows:

```
Enter the base CSR of the kwv11-C in use(default 170420 octal):
```

If the user then presses Ctrl/C - HALT, a VAXELN fatal bugcheck occurs as follows:

```
**** Fatal Bugcheck, VAXELN V3.2 FATLMEMERR, unrecoverable
                                                    memory error

 Current Job = 300d2

 Program Name = NAAAA
```

and then the registers get dumped.

This bugcheck also occurs if, at the above prompt, instead of Ctrl/C HALT, the user enters the addresses 160000—160004. If the user enters any other incorrect address, then a message appears, asking the user to enter another address. This did not occur on a MicroVAX II system.

3.4.10 IGQ11—Does not have a Service Mode Exerciser

The IGQ11 does not have a Service Mode Exerciser Test, as stated in the *MDM Programmer's Guide*. This results in the IGQ11 not being continuously exercised with the Service Menu #4 or Menu Mode #2 Selection "Exercise system continuously".

3.4.11 DRQ3B—Diag can cause system to hang while exercising

CONFIGURATION: Mayfair 2,dssi,lance,dmv11,drq3b,dtqna,desqa,tk70

If the DRQ3B is exercised in the above configuration for an extended period of time, then the system will eventually hang and will have to be powered down and powered back up again in order for MDM to be rebooted. The time in which it takes the system to hang is anywhere from 2 minutes to 24 hours, but it will always hang. Once the system hangs, the user cannot enter CTRL/C mode or even BREAK out of MDM; they are just hung up and must power up the system again in order to continue. This problem can be reproduced consistently quicker with the following configuration, in which a GRANT continuity card is placed between the DRQ3B and the rest of the system:

```
(BA213 Box)
     Slot 1      Slot 2      Slot 3     Slot 4          Slot 5
     Mayfair 2    Memory     Desqa      Grant Card      q3b
```

The problem has been reproduced with a Mayfair 3 and with a MicroVAX 2 CPU when testing as in the above system with the GRANT card; so it does not seem to be a CPU-dependent problem. An exerciser test 2 seems to be causing the hang.

3.4.12 NALAA—LPS40 Fails Utility Test 2

The diagnostic Utility Test #2 "Print Engine Emulator Test" fails. The operator is not informed nor is the operator given the opportunity to connect the Emulator Test Device. If the device is not connected, the test will fail.

3.4.13 NALAA—LPS40 Fails Utility Test 4

The diagnostic Utility Test #4 "Print Engine Emulator Test" fails without advising the operator that the test is for a *duplex printer only*.

3.4.14 IGQ11—CTRL/C HALT during functional test disables device

The IGQ11 disables itself. If a "CTRL/C HALT" is issued during the IGQ11 Functional Test, the next time that functional test 2 "Relocation Memory Test" or functional test 4 "Shared Memory Address" is run, the IGQ11A disables itself. Both tests are Verify Mode tests. This occurs with both the MicroVAX and the Mayfair I CPU. A SHOW DISABLE command indicates that the monitor disabled the device as a result of an "ELN NO ACCES ERROR."

3.4.15 VSV21—Fails Service Exercisers when run with the VS550

Problems occur when exercising the VSV21 and VS550 together on a system, but not when exercising the VSV21 alone. The solution is to run the VSV21 individually under service mode when a VS550 is present in the system configuration.

3.4.16 CXF32—Fails utility test 1 with KA650 CPU

The diagnostic fails utility test 1, "Staged loopback test", with all ports looped back or with just one port looped back when run under the KA650 CPU. This error occurs regardless of which half of the board is being tested. A typical display follows:

```
There were 17 data errors in 10 cycles.
Interrupt failure occurred while transmitting on line 8.
DHCX0A - Error number 30
Error during port interrupt test.
```

3.4.17 DSSI—Diagnostic is disabled if CTRL/C entered in functional test

If a Ctrl/C is entered during functional test 4, the diagnostic raises a "No Access Violation" and is disabled by the monitor. This may also happen during Exerciser tests and MDM Menus 1 and 6. If testing is to continue, MDM must be rebooted or a RESET CONFIG, CONFIG must be done from CLM.

3.4.18 TSV05—Diagnostic reports a unit even if no unit present

When a system is configured with a TSV05 controller but without an attached drive, the diagnostic reports the following:

```
TSV05 Magtape Controller
    TSV05 - Unit #  0, Tape Drive Offline
```

3.4.19 VS550—Diagnostic fails when exercised with the TK70

When exercising the VS550 and the TK70 diagnostics together, the VS550 will fail during exerciser test # 2 with the following error:

```
VS550 - Error Number 12
there were errors during the test
M7651 is the FRU
```

This error will occur when exercising the whole system or just exercising the TK70 and VS550 together.

3.4.20 IAV11B—Utility test 3 needs extra (nonprompted for) CR

When running utility test 3 for the IAV11B, the default response to the following question (marked by the asterisks) is NOT displayed to the user and if the default is taken by the user, the diagnostic sits there until an extra (nonprompted for) return is entered.

```
Do you want current calibration? [Y/N] y
Open bulkhead frame of microvax.
Attach current output test connector 2G-M00AA
to the IAV11-B (onboard LED is ON);
see also appendix in the manual
"Industrial I/O-modules for the Q-BUS"
Hit RETURN when ready to go on

Informational: The current output config. plug is set to 0-20 mA

*HERE** Enter number of channel to calibrate:
```

If the user enters a response that is greater than 3 or less than 0 at this last question, the cursor jumps to the next line and waits. In order for the tests to continue, the user must enter another carriage return; however, this carriage return is not prompted for by the diagnostic and causes confusion. Once this next return is entered, the tests continue with the default channel number of zero.

Thus, this extra carriage return should not be needed and also the default response to the question should be displayed to the user.

3.4.21 KFQSA—Diagnostic will not see RF71 drives on first configure

In any system with an RF71 attached to a KFQSA controller, the drive will not be seen by the diagnostic during the initial CONFIGURATION command. If a second CONFIGURATION command is issued, the drive will be seen by the diagnostic and can be tested.

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